

PATENT APPLICATION
Mo-5000ND
NIT-259-ND

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF:)
)
SHINICHI TSUBOI ET AL)
)
SERIAL NUMBER: TO BE ASSIGNED)
)
FILED: HEREWITH)
)
TITLE: AGENTS FOR PRESERVING)
TECHNICAL MATERIALS)
AGAINST INSECTS)

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Dear Sir:

Prior to calculation of the filing fee and examination of the present application,
please amend the application as follows:

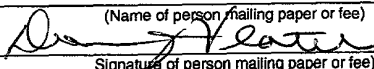
"Express Mail" mailing label number *ET146886916US

Date of Deposit 6/21/01

I hereby certify that this paper or fee is being deposited with the United States
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Donna J. Veatch

(Name of person mailing paper or fee)



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IN THE SPECIFICATION

Please amend the specification as follows:

On page 1, after the title, please insert:

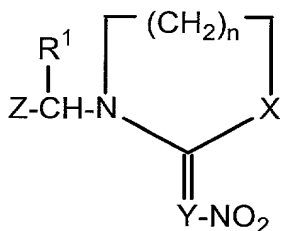
--This is a divisional application of Serial No. 08/543,351, filed October 16, 1995, which is a continuation of Serial No. 07/872,279, filed April 22, 1992 now abandoned.--

IN THE CLAIMS

Please cancel Claims 1-6.

Please add the following claims:

- 7. A method of protecting a technical material comprising the step of applying to the technical material a composition comprising
- (a) from about 10^{-6} to 30 parts by weight of an insecticide having the formula (I)



wherein X is NH or S,

Y is CH or N,

Z is 2-chloro-5-pyridyl or 2-chloro-5-thiazolyl,

R¹ is hydrogen or methyl, and

n is 0 or 1; and

- (b) from about 0.01 to about 90 parts by weight of a fungicide.

8. A method according to Claim 7, wherein the insecticide is 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine.

9. A method according to Claim 7, wherein the technical material is selected from the group consisting of wood, composite wood materials, paper, leather, leather products, synthetic polymers, natural polymers, textiles, and combinations thereof.

10. A method according to Claim 9, wherein the technical material is wood or a composite wood material.

11. A method according to Claim 7, wherein the fungicide is selected from the group consisting of: N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenyl sulfuric acid diamide, N-dichlorofluoromethylthio-N',N'-dimethyl-N-p-toluylsulphamide, N-trichloromethylthiophthalimide, N-dichlorofluoromethylthiophthalimide, 3-iodo-2-propynyl-butylcarbamate, 3-iodo-2-propynyl-hexylcarbamate, 3-iodo-2-propynyl-cyclohexylcarbamate, 3-iodo-2-propynyl-phenylcarbamate, diiodomethyl-p-tolylsulphone, ortho-phenylphenol, tribromophenol, tetrachlorophenol, pentachlorophenol, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4 triazol-1-yl)-2-butanone, β -1(4-chlorophenoxy)- α -(1,1 dimethyl-ethyl)-1H-1,2,4 triazole-1-ethanol, $\pm\alpha$ [2-(4-chlorophenyl ethyl)- α -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol, 1-[2(2,4-dichlorophenyl) 4-propyl-1,3-dioxolan-1-ylmethyl]-1H-1,2,4-triazole, 1-[2(2,4-dichlorophenyl)-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole, (RS)-2(2,4-dichlorophenyl)-1-yl-1H-1,2,4-triazole-2-yl)-2-ol, 1-N-propyl-N-[2,4,6-trichlorophenoxy)ethyl] carbamoylimidazol, 2(2'-furyl)-1H-benzimidazole, methylbenzimidazol-2-ylcarbamate, 2(4'-thiazolyl) benzimidazole, methyl (1-butylcarbamoyl)-2-benzimidazole carbamate, N-methylisothiazolin-3-one, 5-chloro-N-methylisothiazolin-3-one, 4,5-dichloro-N-octylisothiazolin-3-one, N-octylisothiazolin-3-one, C₁₄-C₁₁-4-alkyl-2,6-dimethylmorpholine, 1-hydroxy-2-pyridine-thione and sodium, iron, manganese and zinc salts thereof, tetrachloro-4-methyl

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sulphonyl pyridine, tris-(N-cyclohexyldiaziniumdioxy) aluminum, bis-(N-cyclohexyldiaziniumdioxy) copper, zinc naphthenate, copper salt of 8-hydroxy-quinoline, 1,2,3,5-tetrachloro-4,6-cyanobenzene, N'(3,4-dichlorophenyl-N,N,-dimethylurea, boric acid, borax, borates, methylenebisthiocyanate, 2-thiocycanomethylthiobenzothiazole, tributyl tin octoate, tributyl tin oleate, bistributyl tin oxide, tributyl tin naphthenate, tributyl tin phosphate, tributyl tin benzoate, and combinations thereof.

12. A method of protecting a wood product selected from the group consisting of wood and wood composites against attack by insects comprising applying directly thereto an amount sufficient to effect protection thereof of the compound 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine, wherein the 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine is in the form of a composition further comprising a fungicidally effective amount of a fungicide selected from the group consisting of trihalosulfenyl compounds, iodine compounds, phenols, azole compounds, tin compounds, thiocyanate compounds, quaternary ammonium compounds, benzimidazole compounds, isothiazolinone compounds, morpholine compounds, pyridine compounds, N-cyclohexyldiaziniumdioxy compounds, naphthenate compounds, quinoline compounds, nitriles, boric compounds, ureas, furane compounds, and combinations thereof, and wherein said compound is applied in manner selected from the group consisting of i) soaking said wood product in or with said compound, ii) impregnating said wood product with said compound, iii) brushing said compound onto said wood product, iv) spraying said compound onto said wood product, and v) dipping said wood product in said compound.

13. A method according to Claim 12, wherein the composition comprises from 0.01 to 90 parts by weight of a fungicide

napthenate compounds, quinoline compounds, nitriles, boric compounds, ureas, furane compounds, and combinations thereof.

16. A method according to Claim 15, wherein the insecticide is selected from the group consisting of:

1-(6-chloro-3-pyridylmethyl)-2-nitromethylene-imidazolidine,
3-(6-chloro-3-pyridylmethyl)-2-nitromethylene-thiazolidine,
1-(6-chloro-3-pyridylmethyl)-2-nitromimino-imidazolidine,
1-(6-chloro-3-pyridylmethyl)-2-nitromethylene-tetrahydropyrimidine,
3-(6-chloro-3-pyridylmethyl)-2-nitromethylene-tetrahydro-2H-1,3-thiadine, and combinations thereof.

17. A method according to Claim 16, wherein the insecticide is 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine.

18. A method according to Claim 15, wherein the composition comprises from about 10^{-6} to 30 parts by weight of the insecticide and from about 0.01 to about 90 parts by weight of the fungicide.

19. A method according to Claim 15, wherein the composition comprises from about 0.0005 to 15 parts by weight of the insecticide and from about 0.05 to about 50 parts by weight of the fungicide.

20. A method according to Claim 15, wherein the composition comprises from about 0.005 to 2 parts by weight of the insecticide and from about 0.1 to about 30 parts by weight of the fungicide.

21. A method according to Claim 15, wherein the technical material is a wood product.

22. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenyl sulfuric acid diamide, N-dichlorofluoromethylthio-N',N'-dimethyl-N-p-toluylsulphamide, N-trichloromethylthiophthalimide, N-dichlorofluoromethylthiophthalimide, and combinations thereof.

23. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: 3-iodo-2-propynyl-butylcarbamate, 3-iodo-2-propynyl-hexylcarbamate, 3-iodo-2-propynyl-cyclohexylcarbamate, 3-iodo-2-propynyl-phenylcarbamate, diiodomethyl-p-tolylsulphone, and combinations thereof.

24. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: ortho-phenylphenol, tribromophenol, tetrachlorophenol, pentachlorophenol, and combinations thereof.

25. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4 triazol-1-yl)-2-butanone, β -1(4-chlorophenoxy)- α -(1,1 dimethyl-ethyl)-1H-1,2,4 triazole-1-ethanol, $\pm\alpha$ [2-(4-chlorophenyl ethyl)]- α -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol, 1-[2(2,4-dichlorophenyl) 4-propyl-1,3-dioxolan-1-ylmethyl]-1H-1,2,4-triazole, 1-[2(2,4-dichlorophenyl)-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole, (RS)-2(2,4-dichlorophenyl)-1-)-1H-1,2,4-triazole-2-yl)-2-ol, 1-N-propyl-N-[2,4,6-trichlorophenoxy]ethyl] carbamoylimidazol and combinations thereof.

26. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: 2(2'-furyl)-1H-benzimidazole, methylbenzimidazol-2-ylcarbamate, 2(4'-thiazolyl) benzimidazole, methyl (1-butylcarbamoyl)-2-benzimidazole carbamate, and combinations thereof.

27. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: N-methylisothiazolin-3-one, 5-chloro-N-ethylisothiazolin-3-one, 4,5-dichloro-N-octylisothiazolin-3-one, N-octylisothiazolin-3-one, and combinations thereof.

28. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: C₁₄-C₁₁-4-alkyl-2,6-dimethymorpholine, 1-hydroxy-2-pyridine-thione and sodium, iron, manganese and zinc salts thereof, tetrachloro-4-methyl sulphonyl pyridine, tris-(N-cyclohexyldiaziniumdioxy) aluminum, bis-(N-cyclohexyldiaziniumdioxy) copper, zincnaphthenate, copper salt of 8-hydroxy-quinoline, 1,2,3,5-tetrachloro-4,6-cyanobenzene, N'(3,4-dichlorophenyl-N,N,-dimethylurea, boric acid, borax, borates, methylenebisthiocyanate 2-thiocyanomethylthiobenzothiazole, tributyl tin octoate tributyl tin oleate, bistributyl tin oxide, tributyl tin naphthenate, tributyl tin phosphate, tributyl tin benzoate, and combinations thereof.--

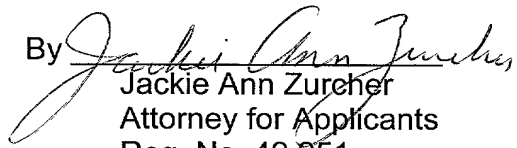
REMARKS

Claims 1-6 have been canceled, and Claims 7-28 have been added. Support for Claim 7 can be found in the specification of page 3, lines 1-10 and page 16, lines 10-17, while support for Claims 8 and 17 can be found on page 4, lines 11-12, Support for Claims 9, 10 and 21 can be found on page 5, lines 1-7, while support for Claims 11 and 22-28 can be found on page 11, line 1-page 14, line 7. Support for Claim 12 can be found on page 4, lines 11-12, page 11, line 1-page 14, line 7, page 16, lines 20-22 and in Examples 9 and 10 on pages 21 and 24, respectively, while support for Claim 13 can be found on page 16, line 14. Support for Claim 14 can be found on page 4, lines 11-12, page 16, lines 14 and 20-22 and in Examples 9 and 10 on pages 21 and 24, respectively, while support for Claim 15 can be found on page 10, line 19-page 14, line 7. Support for Claim 16 can be found on page 4, lines 7-16, while support for Claims 18-20 can be found on page 16, lines 10-17.

The amendments to the claims do not involve any introduction of new matter, whereby entry is believed to be in order and is respectively requested.

Attached is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made".

Respectfully submitted,

By 
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification has been amended as follows:

On page 1, after the title, was inserted:

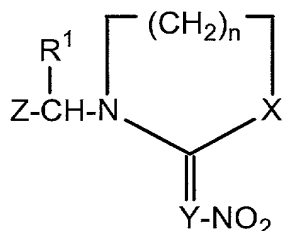
--This is a divisional application of Serial No. 08/543,351, filed October 16, 1995, which is a continuation of Serial No. 07/872,279, filed April 22, 1992 now abandoned--

IN THE CLAIMS:

Claims 1-6 have been canceled.

Claims 7-28 are new and have been added as follows:

--7. A method of protecting a technical material comprising the step of applying to the technical material a composition comprising
(a) from about 10^{-6} to 30 parts by weight of an insecticide having the formula (I)



wherein X is NH or S,

Y is CH or N,

Z is 2-chloro-5-pyridyl or 2-chloro-5-thiazolyl,

R¹ is hydrogen or methyl, and

n is 0 or 1; and

(b) from about 0.01 to about 90 parts by weight of a fungicide.

8. A method according to Claim 7, wherein the insecticide is 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine.

9. A method according to Claim 7, wherein the technical material is selected from the group consisting of wood, composite wood materials, paper, leather, leather products, synthetic polymers, natural polymers, textiles, and combinations thereof.
10. A method according to Claim 9, wherein the technical material is wood or a composite wood material.
11. A method according to Claim 7, wherein the fungicide is selected from the group consisting of: N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenyl sulfuric acid diamide, N-dichlorofluoromethylthio-N',N'-dimethyl-N-p-toluylsulphamide, N-trichloromethylthiophthalimide, N-dichlorofluoromethylthiophthalimide, 3-iodo-2-propynyl-butylcarbamate, 3-iodo-2-propynyl-hexylcarbamate, 3-iodo-2-propynyl-cyclohexylcarbamate, 3-iodo-2-propynyl-phenylcarbamate, diiodomethyl-p-tolylsulphone, ortho-phenylphenol, tribromophenol, tetrachlorophenol, pentachlorophenol, 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4 triazol-1-yl)-2-butanone, β -1(4-chlorophenoxy)- α -(1,1 dimethyl-ethyl)-1H-1,2,4 triazole-1-ethanol, $\pm\alpha$ [2-(4-chlorophenyl ethyl)- α -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol, 1-[2(2,4-dichlorophenyl) 4-propyl-1,3-dioxolan-1-ylmethyl]-1H-1,2,4-triazole, 1-[2(2,4-dichlorophenyl)-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole, (RS)-2(2,4-dichlorophenyl)-1-yl-1H-1,2,4-triazole-2-yl)-2-ol, 1-N-propyl-N-[2,4,6-trichlorophenoxy)ethyl] carbamoylimidazol, 2(2'-furyl)-1H-benzimidazole, methylbenzimidazol-2-ylcarbamate, 2(4'-thiazolyl) benzimidazole, methyl (1-butylcarbamoyl)-2-benzimidazole carbamate, N-methylisothiazolin-3-one, 5-chloro-N-methylisothiazolin-3-one, 4,5-dichloro-N-octylisothiazolin-3-one, N-octylisothiazolin-3-one, C₁₄-C₁₁-4-alkyl-2,6-dimethylmorpholine, 1-hydroxy-2-pyridine-thione and sodium, iron, manganese and zinc salts thereof, tetrachloro-4-methyl

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sulphonyl pyridine, tris-(N-cyclohexyldiaziniumdioxy) aluminum, bis-(N-cyclohexyldiaziniumdioxy) copper, zinc naphthenate, copper salt of 8-hydroxy-quinoline, 1,2,3,5-tetrachloro-4,6-cyanobenzene, N'(3,4-dichlorophenyl-N,N,-dimethylurea, boric acid, borax, borates, methylenebisthiocyanate, 2-thiocyanomethylthiobenzothiazole, tributyl tin octoate, tributyl tin oleate, dibutyl tin oxide, tributyl tin naphthenate, tributyl tin phosphate, tributyl tin benzoate, and combinations thereof.

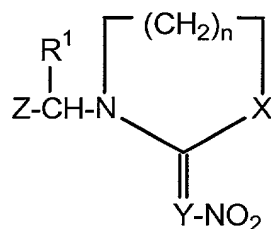
12. A method of protecting a wood product selected from the group consisting of wood and wood composites against attack by insects comprising applying directly thereto an amount sufficient to effect protection thereof of the compound 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine, wherein the 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine is in the form of a composition further comprising a fungicidally effective amount of a fungicide selected from the group consisting of trihalosulfenyl compounds, iodine compounds, phenols, azole compounds, tin compounds, thiocyanate compounds, quaternary ammonium compounds, benzimidazole compounds, isothiazolinone compounds, morpholine compounds, pyridine compounds, N-cyclohexyldiaziniumdioxy compounds, naphthenate compounds, quinoline compounds, nitriles, boric compounds, ureas, furane compounds, and combinations thereof, and wherein said compound is applied in manner selected from the group consisting of i) soaking said wood product in or with said compound, ii) impregnating said wood product with said compound, iii) brushing said compound onto said wood product, iv) spraying said compound onto said wood product, and v) dipping said wood product in said compound.

13. A method according to Claim 12, wherein the composition comprises from 0.01 to 90 parts by weight of a fungicide

14. A method of protecting a wood product selected from the group consisting of wood and wood composites against attack by insects comprising applying directly thereto a composition comprising an amount sufficient to effect protection thereof of the compound 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine and from 0.01 to 90 parts by weight of a fungicide, wherein the composition is applied in manner selected from the group consisting of i) soaking said wood product in or with said compound, ii) impregnating said wood product with said compound, iii) brushing said compound onto said wood product, iv) spraying said compound onto said wood product, and v) dipping said wood product in said compound.

15. A method of protecting a technical material comprising the step of applying to the technical material a composition comprising

(a) an insecticidally effective amount of an insecticide having the formula (I)



wherein X is NH or S,

Y is CH or N,

Z is 2-chloro-5-pyridyl or 2-chloro-5-thiazolyl,

R¹ is hydrogen or methyl, and

n is 0 or 1; and

(b) a fungicidally effective amount of a fungicide selected from the group consisting of trihalosulphenyl compounds, iodine compounds, phenols, azole compounds, tin compounds, thiocyanate compounds, quaternary ammonium compounds, benzimidazole compounds, isothiazolinone compounds, morpholine compounds, pyridine compounds, N-cyclohexyldiaziniumdioxo compounds,

napthenate compounds, quinoline compounds, nitriles, boric compounds, ureas, furane compounds, and combinations thereof.

16. A method according to Claim 15, wherein the insecticide is selected from the group consisting of:

1-(6-chloro-3-pyridylmethyl)-2-nitromethylene-imidazolidine,
3-(6-chloro-3-pyridylmethyl)-2-nitromethylene-thiazolidine,
1-(6-chloro-3-pyridylmethyl)-2-nitromimino-imidazolidine,
1-(6-chloro-3-pyridylmethyl)-2-nitromethylene-tetrahydropyrimidine,
3-(6-chloro-3-pyridylmethyl)-2-nitromethylene-tetrahydro-2H-1,3-thiadine, and
combinations thereof.

17. A method according to Claim 16, wherein the insecticide is 1-(6-chloro-3-pyridylmethyl)-2-nitroimino-imidazolidine.

18. A method according to Claim 15, wherein the composition comprises from about 10^{-6} to 30 parts by weight of the insecticide and from about 0.01 to about 90 parts by weight of the fungicide.

19. A method according to Claim 15, wherein the composition comprises from about 0.0005 to 15 parts by weight of the insecticide and from about 0.05 to about 50 parts by weight of the fungicide.

20. A method according to Claim 15, wherein the composition comprises from about 0.005 to 2 parts by weight of the insecticide and from about 0.1 to about 30 parts by weight of the fungicide.

21. A method according to Claim 15, wherein the technical material is a wood product.

22. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenyl sulfuric acid diamide, N-dichlorofluoromethylthio-N',N'-dimethyl-N-p-toluylsulphamide, N-trichloromethylthiophthalimide, N-dichlorofluoromethylthiophthalimide, and combinations thereof.

23. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: 3-iodo-2-propynyl-butylcarbamate, 3-iodo-2-propynyl-hexylcarbamate, 3-iodo-2-propynyl-cyclohexylcarbamate, 3-iodo-2-propynyl-phenylcarbamate, diiodomethyl-p-tolylsulphone, and combinations thereof.

24. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: ortho-phenylphenol, tribromophenol, tetrachlorophenol, pentachlorophenol, and combinations thereof.

25. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4 triazol-1-yl)-2-butanone, β -1(4-chlorophenoxy)- α -(1,1 dimethyl-ethyl)-1H-1,2,4 triazole-1-ethanol, $\pm\alpha$ [2-(4-chlorophenyl ethyl)- α -(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol, 1-[2(2,4-dichlorophenyl) 4-propyl-1,3-dioxolan-1-ylmethyl]-1H-1,2,4-triazole, 1-[2(2,4-dichlorophenyl)-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole, (RS)-2(2,4-dichlorophenyl)-1-yl)-1H-1,2,4-triazole-2-yl)-2-ol, 1-N-propyl-N-[2,4,6-trichlorophenoxy)ethyl] carbamoylimidazol and combinations thereof.

26. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: 2(2'-furyl)-1H-benzimidazole, methylbenzimidazol-2-ylcarbamate, 2(4'-thiazolyl) benzimidazole, methyl (1-butylcarbamoyl)-2-benzimidazole carbamate, and combinations thereof.

27. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: N-methylisothiazolin-3-one, 5-chloro-N-ethylisothiazolin-3-one, 4,5-dichloro-N-octylisothiazolin-3-one, N-octylisothiazolin-3-one, and combinations thereof.

28. A method according to Claim 15, wherein the fungicide is selected from the group consisting of: C₁₄-C₁₁-4-alkyl-2,6-dimethymorpholine, 1-hydroxy-2-pyridine-thione and sodium, iron, manganese and zinc salts thereof, tetrachloro-4-methyl sulphonyl pyridine, tris-(N-cyclohexyldiaziniumdioxy) aluminum, bis-(N-cyclohexyldiaziniumdioxy) copper, zincnaphthenate, copper salt of 8-hydroxy-quinoline, 1,2,3,5-tetrachloro-4,6-cyanobenzene, N'(3,4-dichlorophenyl-N,N,-dimethylurea, boric acid, borax, borates, methylenebisthiocyanate 2-thiocyanomethylthiobenzothiazole, tributyl tin octoate tributyl tin oleate, bistributyl tin oxide, tributyl tin naphthenate, tributyl tin phosphate, tributyl tin benzoate, and combinations thereof.--